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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,846	09/06/2000	Hajime Tabata	0505-0686P	9786

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EXAMINER

NGUYEN, HUY D

ART UNIT	PAPER NUMBER
2681	13

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/655,846

Applicant(s)

TABATA ET AL.

Examiner

Huy D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (U.S. Patent No. 6,017,049) in view of Swanson et al. (U.S. Patent No. 6,009,563) and in further view of O'Neill, Jr. (U.S. Patent No. 6,069,588).

Regarding claims 1-2, 12, Spector discloses an interactive safety helmet for a bicyclist comprising: transceiver 16 to which microphone 19 and loudspeakers 13 and 14 are connected (FIG. 3 & 5; Col. 4, lines 62-65). Spector fails to teach that the transceiver is powered by a built-in battery. Swanson et al. teach a sports safety helmet which includes an integral of transceiver and batteries (col. 4, lines 8-9). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of having the transceiver powered by a built-in batteries as taught by Swanson et al. for convenience. The combination of Spector & Swanson et al. fail to teach a repeating apparatus mounted on vehicle for communicating with the transceiver. However, the preceding limitation is well known in the art. O'Neill, Jr. discloses an inside electronic package 110 coupling the inside portion 106a to a radiotelephone 114, and is located adjacent the inside portion 106a and remote from the radiotelephone 114. The electronic package includes a receive amplifier that amplifies RF signals that are received from the outside antenna 102 via the through-the-window coaxial coupler 106 and that provides the amplified RF

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signal to the radiotelephone 114. The electronic package also include a transmit amplifier that amplifies RF signals from the radiotelephone 114 before being passed through the coaxial coupler. The transmit amplifier raise the transmitted power from the outside antenna 102 to desired levels (FIG. 1; Col. 4, lines 40-51). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the teaching of O'Neill, Jr. in the combination of Spector & Swanson et al. in order to amplify the transmit/receive signals to the desired levels to maintain the signal quality and to conserve battery of transceiver 16.

Regarding claims 4, 14, the combination teaches the claimed invention except that the radio wave transceiver is removably mounted at the center of a rear portion of each helmet. It would have been an obvious matter of design choice to removably mount the transceiver anywhere on the helmet for convenience.

Regarding claim 11, the combination also teaches that radio wave transceiver 16 includes antenna 17 for transmitting/receiving radio wave signals [Spector - Col. 3, line 41].

Regarding claim 13, the combination does not mention about the battery size. However, AAA is a standard battery size. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build battery accommodation section corresponding to cell size AAA for convenience.

3. Claims 3, 5-10, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (U.S. Patent No. 6,017,049) in view of Swanson et al. (U.S. Patent No. 6,009,563) and O'Neill, Jr. (U.S. Patent No. 6,069,588) and in further view of Heddle et al. (U.S. Patent No. 5,703,794).

Regarding claims 3, 8, 16-17, Spector discloses an interactive safety helmet for a bicyclist comprising: transceiver 16 to which microphone 19 and loudspeakers 13 and 14 are connected (FIG. 3 & 5; Col. 4, lines 62-65). Spector fails to teach that the transceiver is powered by a built-in battery. Swanson et al. teach a sports safety helmet which includes an integral of transceiver and batteries (col. 4, lines 8-9). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of having the transceiver powered by a built-in batteries as taught by Swanson et al. for convenience. The combination of Spector & Swanson et al. fail to teach a repeating apparatus mounted on vehicle for communicating with the transceiver. However, the preceding limitation is well known in the art. O'Neill, Jr. discloses an inside electronic package 110 coupling the inside portion 106a to a radiotelephone 114, and is located adjacent the inside portion 106a and remote from the radiotelephone 114. The electronic package includes a receive amplifier that amplifies RF signals that are received from the outside antenna 102 via the through-the-window coaxial coupler 106 and that provides the amplified RF signal to the radiotelephone 114. The electronic package also include a transmit amplifier that amplifies RF signals from the radiotelephone 114 before being passed through the coaxial coupler. The transmit amplifier raise the transmitted power from the outside antenna 102 to desired levels (FIG. 1; Col. 4, lines 40-51). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the teaching of O'Neill, Jr. in the combination of Spector & Swanson et al. in order to amplify the transmit/receive signals to the desired levels to maintain the signal quality and to conserve battery of transceiver 16. The combination of Spector, Swanson et al., and O'Neill, Jr. does not teach that the repeater includes a mute function and attenuates or interrupts when a sound source having higher priority order

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and another sound source having lower priority order interfere with each other. However, the preceding limitation is well known in the art. Heddle et al. discloses a method and system for mixing audio stream wherein audio streams from other applications or program modules that do not have the sound focus and are not audible. If the sound focus changes, the audio mixer mutes the audio streams from the application which had the sound focus and begins sending the audio streams from the new application that has gained the sound focus to the sound card [Col. 2, lines 32-47]. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the teaching of Heddle et al. within the system of the combination of Spector, Swanson et al., and O'Neill, Jr. in order to eliminate unwanted sound.

Regarding claims 5-7, 9-10, the combination also teaches that audio streams from each of the sound generators are connected to audio mixer 22. The audio mixer 22 selects the sound streams from one or more of the sound generators G1-GN and mixes those sound streams as necessary to produce an output signal. The output signal from the audio mixer 22 is connected via the system bus 15 to sound card or sound device 24 [Heddle et al. - Col. 7, lines 1-9].

Regarding claim 15, the combination fails to teach navigation system. The Examiner takes official notice that navigation system supported for movement between positions is well known in the art of communications. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have navigation system supported for movement between positions as in well known in the art for convenience.

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Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy D Nguyen whose telephone number is 703-305-3283. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-6750.

(H)


SINH TRAN
PRIMARY EXAMINER